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May 21, 2009

Susan Lessard, Chair Board of Environmental Protection c/o Department of Environmental Protection 17 State House Station Augusta, ME 04333-0017

## Dear Chair Lessard:

Enclosed please find an appeal in the matter EVERGREEN WIND POWER III.

LLC, ROLLINS WIND PROJECT, L-24402-24-A-N (approval), L-24402-TH-B-N

(approval), L-24402-1W-C-N (approval).

The FRIENDS OF LINCOLN LAKES (FOLL) is the primary appellant in this matter. FOLL is an association of property owners, some permanent residents and some seasonal residents, who oppose the Rollins Wind Farm project. FOLL was incorporated in Maine in December 2008. FOLL participated in the Department of Environmental Protection (DEP) process in this matter by submitting written testimony, as well as oral testimony at the public meeting.

The town of Lincoln has refused to recognize FOLL as a legally cognizable entity for purposes of the FOLL appeal of the local permits issued, and this matter is currently being litigated in court. It was thought to be prudent to include individual members of FOLL as appellants in this matter, and their statements about how they are aggrieved parties are included in the attached appeal letter. If, however, the Board of Environmental Protection (BEP) were to formally recognize FOLL as an entity with

standing to bring this appeal, then most, if not all, individual appellants would withdraw as appellants, in favor of FOLL.

Sincerely,

Lyane Williams, Esq.
Attorney for Appellants

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ce: Commissioner David Littell

Ryan Chaytors, Evergreen Wind Power III, LLC

Juliet Browne, Esq.

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#### APPEAL OF DEPARTMENT ORDER

## IN THE MATTER OF

EVERGREEN WIND POWER III, LLC
Lincoln, Lee, Winn, Burlington, Mattawamkeag, Penobscot County
ROLLINS WIND PROJECT
L-24402-24-A-N (approval)
L-24402-TH-B-N (approval)
L-24402-TW-C-N (approval)

The above-cited approval was made under the Site Location of Development Act and the Natural Resources Protection Act (38 M.R.S.A. § 481 et seq. § 480 et. seq.), the Maine Wind Energy Act (35-A M.R.S.A. § 3401 et. seq.) and Sec. 401 of the Federal Water Pollution Control Act. Appellants bring this appeal under 38 M.R.S.A. §341(D)(4). The Order approving the Rollins Wind Project was dated and issued by the Department of Environmental Protection (DEP) on April 21, 2009.

## APPELLANTS

THE FRIENDS OF LINCOLN LAKES (FOLL) is an association of both seasonal and year-round property-owners in Lincoln, Maine. FOLL actively participated in the DEP process and submitted testimony in opposition to the Rollins Wind Farm project. FOLL also participated before the Lincoln Planning Board in the matter of permitting for this project and before the Lincoln Town Council regarding the TIF process. Members of FOLL hike, bike and camp, view wildlife and birds, and engage in all forms of recreation in the area of the proposed project. They likewise own property on the impacted fakes and hills and some own multiple properties that they lease out seasonally. FOLL members are very concerned that their peace and enjoyment of their properties will be irreparably harmed if the Rollins Wind Farm project is constructed. LARRY G. ARTHURS is a property owner on CARIBOU POND, Lincoln, Maine, a retired federal agent with 40 years experience, and an aggrieved party in this matter. Mr. Arthur is distressed about the poor quality of the project review and the politically motivated decision-making by the DEP. He believes that the scientific review was lacking and that no proper analysis of the impacts was done. He is particularly concerned with the failure to fully consider all noise impacts by including current line/point noise review, which opponents presented to the Department but which was stated to be irrelevant. Nor was there truly independent pre-construction expert review of such

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impacts, rather than the planned post-analysis, which is too little too late. Likewise, health impacts, which are now known to exist, were ignored. Mr. Arthurs seeks a full, proper, pre-construction review of the noise impacts and a full review of the human, and wildlife, health impacts of low DB noise and other acoustic issues.

MIKE DICENZO is a resident of Lincoln, Maine and has property on Folsom Pond. Mr. Dicenzo believes that the review of this project was not fact based, and he believes that if this project were built it would forever deteriorate the quality of this land of 13 lakes. Mr. Dicenzo recognizes the problems with the failure of the DEP to demand a valid preconstruction, real time noise study, which was reliably predict the significant impacts of noise that travels over water. Mr. Dicenzo is also very concerned that no consideration was given to health impacts and the data that is being released by medical professionals, and be seeks a full and complete evaluation of all the scientifically based date.

RACHEL Y. DICKER is a property owner on Egg Pond in Lincoln, Maine. Her primary home is on Route 6 across from the Rollins Mill Project. Ms. Dicker considers herself an aggrieved party in that she is not only a neighbor of the proposed project, but is very concerned with the total lack of scientific analysis and review of the impacts that the project will have on the health of neighbors and wildlife in the area, and she fears for impacts on her own health and well-being.

HARRY C. EPP is Lincoln resident and property owner. It appears to Mr. Epps that the DEP has totally ignored solid scientific evidence about many environmental issues related to wind turbines. He lives close to this project and based on information produced by professional researchers there is going to be a tremendous impact on the wildlife in this area, such as the eagles, as well as on people who will be living close to it. Mr. Epps notes that there is research available, yet the DEP rejected the research submitted by the Friends of Lincoln Lakes, and Lincoln residents, as "irrelevant." He believes that this project and others like it must be stopped until adequate/independent honest studies can be conducted showing the true impact of wind turbines on the environment, on humans and on wildlife since relying only on studies submitted by First Wind and its affiliates calls into question the objectivity of the DEP.

ELAINE GOODWIN is a Lincoln property owner and is extremely concerned about the myriad of issues that are directly related to the negative and destructive results the

placement of the wind turbines will have on the environment, and on the people and wildlife who live within it, should they go forward. She is troubled that residents who live in the area of the project will be exposed, in varying degrees, to the constant background noise, to the "flicker" which the turbines produce and to the phenomenon of "strobe effect" which the red lights which will cause on the horizon of the night skyline. Ms. Goodwin also notes that in the noise analysis, little concern was shown about the fact that the turbine sounds will be amplified over bodies of water, of which there are many in the area of the project. Although the DEP did admit that they are concerned about the impact that these 400 foot turbines will have on bats and birds, including eagles and eaglets, Ms. Goodwin finds the plan to deal with these impacts, post-construction monitorine, to be shocking, in that only after large numbers of bats and birds, including possibly eagles, are sacrificed will the state understand the terrible impacts that this project will have on the wildlife community, and the human community, in this region. HAROLD AND JOAN GOODWIN are long-time residents of Curtis Farm Road in Lincoln, Maine. Their home is their major retirement asset. The home is within 3500 feet of one of the ridges on which Evergreen III, LLC. (First Wind) is constructing wind turbines as part of its Rollins project. Mr. and Mrs. Goodwin do not believe that the computer modeling for noise adequately addresses Db-A noise levels that will affect them in an extremely quiet, rural setting. The application from Evergreen III, LLC did not address low frequency vibration as measured on the Db-C scale and which is know to have deleterious health effects. Furthermore, Mr. and Mrs. Goodwin express deep concern about inadequate mapping of soits, bedrock, and aquifers and how blasting will affect their artesian well and the foundation of their home and those of their neighbors. Mr. and Mrs. Goodwin also express their concern about the impact of road widening, construction of a power line along Half Township Road, and extensive construction activity intruding on their quiet rural setting and the subsequent loss of property value and marketability of their home both during and post-construction. In short, Mr. and Mrs. Goodwin believe that this project should never have been sited in a rural-residential. zone.

MRS. JOANNE HINKELMAN is a Lincoln resident and owner of property on Loag

Pond. Mrs. Hinkelman fears for the impacts that this project will have on her health and

the environment in her neighborhood, and she believes that many of these impacts will not emerge immediately but will over time. The long-term affects of this project are what concern Mrs. Hinkelman the most.

GORDON JOHNSON is a resident of Lincoln, Maine. He graduated from MIT (BS, Physics, 1963) and worked for several vacuum equipment companies - as Chief Engineer for two - and joined IBM Research in Yorktown Heights, NY, in 1974, as a Research Staff Member, Mr. Johnson managed Yorkdown's Silicon Facility Operations group and concluded his IBM career as a Senior Engineer in charge of contamination control for the IBM East Fishkill Advanced Silicon Technology Center. Retiring from IBM in June 1992, he founded a consulting firm, Contamination Control Concepts, Inc., moved to Phillips, ME in 1996 and to Lincoln, Maine in 2005. Mr. Johnson is extremely concerned about many aspects of the project, including its basic feasibility, the frivolous use of taxpayer dollars and the long-term impact on property taxes. With specific reference to the DEP approval of the Rollins project, Mr. Johnson is concerned about the negative environmental impact on the region, in terms of both sight and sound. He finds the DEP analysis of noise particularly disturbing, especially in view of the noise problems reported in Mars Hill. In particular, Mr. Johnson notes that the DEP's own consultant, EnRad, admits that certain aspects of sound propagation are beyond the scope of models, and therefore finds it troubling that the DEP concluded that noise standards would be met, based on invalid modeling data.

RICK KAUL lives in Millinocket, is a property owner on Long Pond in Lincoln and an aggrieved party of the Rollins Wind Turbine project. Mr. Kaul is troubled by the less than adequate consideration, research and response to the concerns of property owners in the area of the Rollins Wind project and that the DEP was more concerned with the political agenda rather that the issues roised by property owners. Since this is one of the first wind projects to be sited in a residential area, as well as within the location of over thirteen lakes – a major Maine recreational region – Mr. Kaul believes that more attention needs to be paid to the issue of sound and the model used by First Wind in their noise study. Likewise there was no consideration of health impacts to abutters, despite the fact that such peer-reviewed evidence exists. Mr. Kaul seeks a full, proper review of the noise

analysis, as well as proper reviews of human health impacts of low DB noise and acoustic effects, as well as aminal and environmental impacts.

KARL MC GILLVRAY is a Lincoln property owner and is an aggrieved party, with concerns about the lack of process during the public meeting. No questions were answered and the proceeding was rushed, as if the decision had already been made. Mr. Mc Gillyray is also concerned about the benefits, or lack thereof, of this project to the local community, since the people in the community will not in fact experience any benefits. They will not get the power that is produced, and their bills will not be decreased. On the other hand, their property values will decrease and those who rent out their camps and seasonal homes will find it very difficult to find renters. MARJORIE MITCHELL is an owner of property on Caribou in Lincoln. Her property on Caribou Pond will lose much of its beauty, value, and future marketability when it looks upon eleven turbines that are 389 feet high from base to the apex of the blade. She is also very concerned about the spraying of herbicides on the clear cuts that will wash down the mountain and poison the fish that her family catches and eats. MARY BETH NOLETTE is an aggrieved resident, property owner and taxpayer in the town of Lincoln, Maine. Two of her properties are on Long Pond, adjacent to Rollins Mountain, Installing wind turbines will adversely affect Ms. Nolette's ability to enjoy these camps as well as to enjoy tranquil recreation and naturalist activities in the local area. Ms. Notette believes that the DEP deflected difficult, yet vital, questions in favor of quickly approving this wind farm. As a scientist with a background in biology and chemistry, she believes that we owe it to our citizens and to our future generations to understand the long-term impacts of industrializing most of our Maine hilltops. Ms. Notette is concerned that questions presented to the DEP regarding local birds and wildlife were given vague answers that were demeaning to nature and skirted the issues. In addition, she is troubled that the crucial questions regarding the inclusion of all sound frequencies, both the background and process levels of DbC, were not satisfactory, nor die the DEP show an understanding of the echo and reflection of sound off the takes. Likewise, Ms. Nolette wonders why the DEP refused to utilize current information from existing Maine wind installations in their decision when that information was readily

available.

DON SMITH IS a full-time resident of Caribou Pond, Lincoln. He lives in the shadows of the mountain and believes that the review by the Maine DEP of this project is more than just inadequate. All reports that were considered by the DEP were submitted by the applicant and the research submitted by the opponents was ignored. Mr. Smith demands that the BEP review all of the data submitted by all parties and make an informed decision.

DR GARY STEINBERG is a property owner on Long Pond in Lincoln and an aggrieved party in this matter. Dr. Steinberg is extremely concerned with the tack of quality of the DEP review of the project. He believes that the DEP's unwillingness to consider conflicting data and analysis regarding noise impacts, particularly the impacts on neighbors of constant low frequency sound, calls into doubt the basis on which this decision was made. Dr. Steinberg is a medical professional, with degrees in biology, chemistry and dental medicine, and is experienced with scientific analysis. He believes that the applicant's noise study is inadequate and incomplete, in that it fails to include current line/point review, despite the fact that the Friends of Lincoln Lakes submitted such data. Nor does it include truly independent peer review, dbC pre-construction analysis, and a consideration of health impacts on abutters. Dr. Steinberg seeks a full, proper review of all noise/sound issues, as well as the human health impacts of low frequency noise and acoustic effects, and impacts on wildlife.

# OBJECTIONS TO FINDINGS AND CONCLUSIONS AND BASIS FOR SUCH OBJECTIONS

#### Applicant's Noise and Sound Studies are Flaved

Appellants contend that the grant of a permit in this matter was unsupported by substantial evidence in the record, regarding the compliance of the project with the Site Development of Location Law, and Maine Department of Environmental Protection Chapter 375.10, Control of Noise, and that such failure to comply with the DEP noise standards will produce actual harm to persons and witdiffe living in the vicinity of the turbines. Appellants further contend that the Commissioner should have solicited independent technical information on the impacts of noise and sound to be produced by this project.

Appellants object to the DEP's refusal to hold a public hearing at which time technical information addressing noise standards and the measurement of predicted noise levels could be addressed. The written denial of the public hearing request included a statement that "there is no credible conflicting technical information regarding licensing criteria relevant to this application." Letter from the DEP in Response to Friends of Lincoln Lakes' (FOLL) request for a public hearing, dated January 9, 2009. However, after consulting with noise expert Rick James, of E-Coustic Solutions, FOLL submitted comments regarding research on turbine noise that conflicted with the conclusions in the applicant's noise study. On January 10, 2009, Mr. James himself submitted technical comments to Commissioner Littell, in which he critiqued Chapter 375, the DEP's noise regulations. Given that opponents did submit technical information and opinion from a nationally recognized sound expert, it is disingenuous to make a statement that there was "no credible conflicting technical information" available.

Appellants also question whether there is a basis for milizing point source calculations in applicant's noise study, since research has shown that noise will travel further with line source calculations. Generally accepted scientific practices indicate that line source calculations should be used for noise prediction at receivers parallel to the axis of the turbine string, and appellants question why this was not done in the applicants noise study. See Sound Level Assessment completed by RSE, dated October 30, 2008. Appellants also contend, based on recommendations made by Mr. James, that attenuation due to terrain or vegetation is immaterial when turbines are line of site to homes with less atmospheric attenuation as frequencies drop. Low frequencies travel much longer distances through the atmosphere so a model that does not include low frequency dBC is inherently flawed in its ability to predict the type of noise known to cause health issues. The applicant's Sound Level Assessment did not utilize a model that included dBC.

In written submissions, Appellants raised concerns regarding the Chapter 375 §10 compliance standard of 45 dBA at protected locations and noted that the dBA standard or A-weighting, is not accurate at measuring the sound generated from wind turbines and urged the Department to measure compliance based on a dBC standard, or C-weighting, which emphasizes sound at frequencies less than 250 Hz. With regard to this issue, EnRad, the peer reviewer brought in by the DEP, stated that

"wind turbines rotating under conditions necessary for power production produce a measurable broadband amplitude modulation of sound ("swoosh") that occurs during the passage of each turbine blade and approximately once per second (±1 Hz), which should not be confused with infrasound. The A-weighting scale is

widely used in noise ordinances and sound control regulation. The introduction of C-weighting for the assessment of wind turbine sound is *preliminary and interfined* on a broad basis.

[Emphasis added] Order at 8.

EnRad goes on to state that an "analysis of amplitude modulation is beyond the score of models..." [Emphasis added] Id—Yet those modeling techniques that are unable to take into account these low frequency sounds were exactly what was relied upon by the DEP.

The impacts of industrial wind farms, particularly in residential zones, where this project is sited, is an ever evolving science of assessment. It is troubling that the DEP would not wish to consider all relevant evidence. While the DEP considered this evidence as "preliminary and unrefined," it did not suggest that it was either invalid or unreliable. Order at 8.

In summary, the noise study submitted by applicant is flawed in that it failed to consider numerous factors that are inherent when wind turbines are involved. No independent assessment of probable noise impacts was completed and credible conflicting scientific testimony submitted by opponents was either ignored or dismissed by the DEP.

## II. The DEP Failed to Consider the Health Impacts of the Project

The Order states that "[i]n reviewing noise concerns generally associated with wind turbines, the Maine Center for Disease Control (MCDC) within the Department of Health and Human Services (DHHS) commented that, according to a 2003 Swedish EPA review of noise and wind turbines, interference and noise-induced hearing loss is not an issue when studying the effects of noise from wind turbines as the exposure levels are too low. The MCDC further states that it finds no evidence in peer-reviewed medical and public health literature of adverse health effects from the kinds of noise and vibrations associated with wind turbines other than occasional reports of annoyances." Order at 8.

Once again, if the DEP had agreed to hold a public hearing, at which time credible technical evidence could have been submitted, staff would have been exposed to testimony from the increasing number of medical professionals in Maine who have, at the very least, called for a moratorium on the development of industrial wind farms in the state until such time as the medical impacts are more fully understood, as well as from those who are conducting research on this topic.

As the Preamble to Chapter 375 states, "[1]he Board recognizes that the construction, operation and maintenance of developments may cause excessive noise that could degrade the health and welfare of nearby neighbors. It is the intent of the Board to require adequate provision for the control of excessive environmental noise from developments proposed after the effective date of this regulation. [Emphosis added] In this matter, the DEP failed to follow their own regulations when refusing to consider health impacts and denying that there was any available medical evidence addressing this issue.

#### The DEP itself found that

"there is sufficient concern related to the model's ability to accurately predict SDR sounds to require the applicant to implement the assessment plan referenced above. If the compliance data indicates that, under most favorable conditions for sound propagation and maximum amplitude modulation, the Rollins Wind Project is not in compliance with Department standards as described above, within 60 days of a determination of non-compliance by the Department, the applicant must submit, for review and approval, a revised operation protocol that demonstrates that the project will be in compliance at all the protected locations surrounding the development.

Order at 9.

The problem with this after-the-fact assessment is just that – it is after-the-fact.

The major investment in infrastructure will have been made and, like braking a fast moving train, it will be costly, difficult and probably impossible to turn it around.

Even the State's own Maine Technical Bulletin #4, which was quoted in FOLL testimony, notes that sound levels 10 db higher than the background level are perceived by humans to be "twice as loud" as the background level. The "dead quiet" nighttime environment is a common occurrence in rural areas like the Lincoln Lakes region. There is significant risk of turbine noise levels in excess of 10 db above background noise levels when it is quiet on the ponds and the turbines are operating. The low level frequencies emitted by turbines have been found to produce adverse health affects that have been given the name "Wind Turbine Noise Syndrome" and the low frequency sounds travel further than high pitched sounds. However, the applicant's noise study does not differentiate between the types of sounds, and assumes a common db level for all frequencies at a given distance from the turbines.

By stating that there is insufficient evidence to conclude that human health effects can result from turbine noise, the DEP cavalierly dismissed the expressed concerns of medical professionals in this state, the ever-increasing body of scientific knowledge on

these effects and the actual impacts experienced by Mainers Irving near operating wind turbines.

III. Impacts on Wildlife were not Reliably Assessed

As the Order states,

"[i]n order to address concerns raised by MDIFW regarding avian, but and raptor (including eagle) mortality associated with the Rollins Wind Project, the applicant has agreed to conduct post-construction monitoring in consultation with MDIFW and the Department. The applicant submitted a draft post-construction monitoring protocol in which they outline procedures to monitor avian and but casualties, including raptor fatalities, in order to assess the impacts of the project on these species."

Order at 20.

MDIFW noted that the draft protocol is based on the "rapidly evolving methods associated with post-construction assessment."

"Post-construction mortality studies will help address overall mortality rates and negative impacts to the target species. The study will be designed to provide information that can be used to offset potential mortality due to project operation by implementing operational strategies."

īd.

The Maine Natural Resources Protection Act (NRPA) is clear that "the application will be denied if the activity will have an unreasonable impact on protected natural resources or the subject wildlife." Chapter 335(3)(C). The Order in this matter underplays the fact that there is a bald eagle nest within one mile of the project. NRPA states "the department considers the area of the significant wildlife habitat affected by the activity, including areas beyond the physical boundaries of the project and the cumulative effects of frequent minor alterations of significant wildlife habitats." [Emphasis added] [d. . . . .

The Order makes no mention of a habitat conservation plan regarding this nest.

While eagles have been de-listed from the federal endangered species list (although still listed in Maine), they continue to be covered under the Bald and Golden Eagle Protection Act (Eagle Act) and the Migratory Bird Treaty Act. The Eagle Act makes it illegal to take (kill, wound, pursue, shoot, shoot at, poison, capture, trap, collect, molest or disturb) bald or golden eagles. [Emphasis added] 16 U.S.C. § 668(a). 'Disturb' is defined in the

is it is irone that the DEP accepts the "rapidly evolving" post-construction methodology, but not the equally "rapidly evolving" assence of turbine impacts on human health

The cagle next that is the closest to the project area is located on Upper Fond and has been identified by MDIFW as BE468A. This nest is located approximately one mile from the proposed turbine locations on Rolline South. This nest is situated outside the project area; however, it is located within close proximity to the project the potential exists for negative impacts to the nest occupants, in particular, for fledging eaglets." Order at 19-20

Eagle Act as "to agree to bother a hald or golden eagle to a degree that caused, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." The Eagle Act prohibits unregulated take

Given the fact that there is an eagle's nest in the vicinity of the project, it is very troubling that the DEP is only requiring the applicant to use some "rapidly evolving" methodology to assess post-construction mortality of raptors. By the time such assessments are done, the project may have already harmed not only the eagles and eaglets nesting in the area, but numerous other migratory birds and bats. The DEP should have demanded valid pre-construction wildlife studies and the development of a pre-construction habitat plan before issuing the Order.

## SUMMARY OF CONTESTED MATTERS

Appellants contest the following matters:

- The wind study submitted by applicant was flawed and incomplete;
- The noise peer review was incomplete and the conclusions drawn from the peer review by the DEP were unsupported by the En-Rad report;
- The DEP's failure to consider the impacts of turbine noise on human health, despite submissions that support the existence of such impacts, was contrary to the DEP's own regulations.
- 4. The DEP's failure to demand that the applicant conduct additional wildlife studies, in order to study the impact of the project and, in particular, the resultant noise, on wildlife in the area of the project, and to require that the applicant prepare a detailed habitat plan demonstrating how eagles in the vicinity will be protected, is a violation of NRPA and should have precluded the DEP from granting a permit for this project.

# REMEDIES 1

Appellants hereby urge the Board of Environmental Protection to reverse the Commissioner's decision in this matter and to order the DEP to conduct valid, reliable and independent studies on dBC noise and the complex impacts of turbine noise on

humans and wildlife. The wildlife studies must be pre-construction and the DEP should require the applicant to produce a wildlife habitat plan with regard to the eagles in the area once these studies are complete. Specifically, an assessment similar to the Wildlands Lake Assessment should be performed for all lakes/great ponds within 5 miles of the proposed installations so that baseline data of local populations is recorded.

# REQUEST FOR PUBLIC HEARING

Appellants are hereby requesting that the BEP hold a public hearing, at which time Appellants will offer an expert on the topic of turbine noise and sound impacts, as well as one or more experts on the topic of human health impacts of wind turbines.

Given that the DEP dismissed submissions offered by FOLL and others that were based on the research and opinion of the experts, permitting the experts to appear in front of the BEP will give the Board the opportunity to question them about their research findings, as well as the foundations for their opinions about their areas of expertise. Appellants have shown that there have in fact been submissions of credible conflicting scientific information, and the appearance of experts before this Board will better permit the Board to assess the validity of both sets of information and make a more informed decision than the DEP was willing or able to make.

Respectfully submitted,

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